

The opinion in support of the decision being entered today was not written
for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte MALCOLM MUIR



Appeal No. 2005-1761
Application No. 10/073,730

ON BRIEF

Before FRANKFORT, NASE, and BAHR, Administrative Patent Judges.
NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 to 12,
which are all of the claims pending in this application.

We AFFIRM-IN-PART.

BACKGROUND

The appellant's invention relates to supporting brackets for windows, and particularly, to multi-bar hinge linkage supporting brackets arranged to support a window for pivotal movement about either a vertical axis or a horizontal axis, and more particularly, to an end cap assembly for such supporting brackets (specification, p.

1). The Background of the Invention section of the application (specification, pp. 1-2) provides:

[0002] Multi-bar hinge linkage supporting brackets are employed for the support of casement type or projection type windows. That is, the supporting brackets support the windows to permit a pivotal movement about a vertical axis or a horizontal axis. The supporting brackets are also adapted to be connected between a conventional window frame and a window sash, whether the structures be formed of metal, wood, plastic, PVC, composites or structural materials. The supporting brackets are typically arranged to cause the pivot axis of the window to move to and from the window frame so that when the window is opened, both surfaces of the window are accessible from inside of the window frame.

...
[0004] The advantages of windows having supporting brackets has resulted in increased use of the supporting brackets. The increased use has resulted in increased applications, wherein the applications of the supporting brackets requires increased capacity. Specifically, the supporting brackets are subject to increased loading and sealing requirements. While increased material thickness in the supporting bracket can partially accommodate the increased load requirements, the size of the supporting brackets is limited.

[0005] Therefore, the need exists for a supporting bracket having increased load capacity, while retaining traditional sizing restrictions. The need also exists for reducing failure of a supporting bracket under relatively high loading.

The Summary of the Invention section of the application (specification, p. 2)

provides:

[0006] The present invention provides an end cap for a supporting bracket having a multi-bar linkage hinge assembly, wherein the hinge assembly generally includes an elongate track and a linkage. The linkage typically includes at least one arm, which can be coupled to a window, and a slider coupled between the arm and a track. The arm is moveable between (i) a closed position in which the slider is carried by the track and the arm generally overlies the track; and (ii) an open position in which the slider is disposed along the track and the arm extends at an angle with respect to the track.

[0009] Design requirements have placed larger loads on the multi-bar linkage supporting brackets. The present invention provides an increased structural capacity of the supporting bracket by enhancing the capacity of the end cap.

[0010] The end cap of the present construction includes a seating portion sized to cooperatively engage the track, and an upright portion. The upright portion can include a plurality of facets for selectively capturing a portion of the linkage. The end cap includes at least one reinforcing rib extending from the seating portion to the upright portion. Preferably, each facet of the upright portion includes a reinforcing rib.

A copy claims 2 to 12 is set forth in the appendix to the appellant's brief. Claim 1 reads as follows:

An improved multi-bar linkage hinge assembly including a supporting bracket having an elongate track, the improvement comprising:

- (a) an end cap having a seating portion and an upright portion, the seating portion configured to engage the track; and
- (b) at least one reinforcing rib extending from the seating portion to the upright portion.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Seitz	2,731,229	Jan. 17, 1956
Muir	5,898,977	May 4, 1999
Kasai et al. (Kasai)	6,073,405	June 13, 2000

Claims 1 to 6 and 8 to 12 stand rejected under 35 U.S.C. § 103 as being unpatentable over Muir in view of Seitz.¹

Claim 7 stands rejected under 35 U.S.C. § 103 as being unpatentable over Muir in view of Seitz as applied to claim 1 and further in view of Kasai.²

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejections, we make reference to the answer (mailed July 14, 2004) for the examiner's complete reasoning in support of the

¹ On page 6 of the answer, the examiner noted that the appellant's footnote on page 1 of the brief where the appellant assumed that claims 11 and 12 stand rejected under the same grounds as the claim from which they depend (i.e., claim 10) was correct.

² In the final rejection (mailed on September 16, 2003), claim 7 was rejected under 35 U.S.C. § 103 as being unpatentable over Muir in view of Kasai. On page 3 of the answer, the examiner noted his belief that since claim 7 depends from claim 1 it is clear that claim 7 was intended to be rejected under the combination of Muir in view of Seitz, as applied to claim 1, and further in view of Kasai.

rejections, and to the brief (filed April 23, 2004) for the appellant's arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellant and the examiner. Upon evaluation of all the evidence before us, it is our conclusion that the evidence adduced by the examiner is sufficient to establish a case of obviousness with respect to claims 1 to 6 and 8 to 12 but not for claim 7. Our reasoning for these determinations follows.

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A case of obviousness is established by presenting evidence that would have led one of ordinary skill in the art to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988) and In re Lintner, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). Evidence of a suggestion, teaching, or motivation to modify a reference may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from

the nature of the problem to be solved, see In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000), In re Gartside, 203 F.3d 1305, 1319, 53 USPQ2d 1769, 1778 (Fed. Cir. 2000), Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996). As stated by the Federal Circuit in Ruiz v. A.B. Chance Co., 357 F.3d 1270, 1276, 69 USPQ2d 1686, 1690 (Fed. Cir. 2004)

this court has consistently stated that a court or examiner may find a motivation to combine prior art references in the nature of the problem to be solved. See *Pro-Mold*, 75 F.3d at 1573; *Display Techs., Inc. v. Paul Flum Ideas, Inc.*, 282 F.3d 1340, 1346-47 (Fed. Cir. 2002); *In re Huang*, 100 F.3d 135, 139 n.5 [40 USPQ2d 1685] (Fed. Cir. 1996). This form of motivation to combine evidence is particularly relevant with simpler mechanical technologies.

Claim 1

We sustain the rejection of claim 1 under 35 U.S.C. § 103 as being unpatentable over Muir in view of Seitz.

Muir's invention relates to supporting brackets for windows which are arranged to support a window for pivotal movement about either a vertical or a horizontal axis. More particularly, the invention relates to such a supporting bracket which can be used on any side of a window and which can be mounted using existing central mount installation. As shown in Figure 2, a supporting bracket 10 includes a track member 12

receiving an end cap 60. End cap 60, shown in detail in Figure 3A, is preferably provided with two tapered comers 62 for easy insertion between side flanges 14 of the track 12. The end cap 60 is then preferably riveted to the track 12, but may be spot welded or otherwise secured to the track 12. The end cap 60 includes upright angularly related camming surfaces 64. Each camming surface 64 includes a first surface 66 extending at approximately a right angle from a base 61.

Seitz's invention relates in general to fastening devices for mounting an elongate type of instrument or similar object in generally parallel relation to a supporting panel, or other support. Figures 1 to 3 show a mounting for an elongate instrument such as a tuning unit, or the like, which is secured in generally parallel relation to a panel P of a television or radio chassis, for example. The tuning unit comprises a generally tubular body member 1 such as a sleeve, tube or cylinder, or the like, which is constructed of any suitable material such as cardboard, composition material, plastic, etc., and which serves as the coil form or equivalent body of any related type of instrument to be mounted on the supporting panel P. The coil form or tubular body 1 is provided with a winding 2 connected to suitable terminals (not shown) and a movable core 5 within said tubular body 1 which is longitudinally adjustable therein by a rod or shaft 6 connected to the core 5. A fastening device or clip 10 formed from sheet metal is bent into a

U-shape comprising an elongate base 11 intermediate a pair of cooperating arms 20, 25, spaced apart a distance approximating the length of the tube or sleeve defining the coil form or body member 1. Seitz provides longitudinal strengthening ribs 12 on the clip 10 which extending lengthwise on the base 11 and into adjoining portions of the arms 20, 25. Suitable attaching means are provided on the base 11 for securing the clip to the panel P.

In the rejection of claim 1 before us in this appeal (answer, p. 4), the examiner ascertained³ that "Muir fails to disclose the reinforcing rib as claimed." The examiner thereafter concluded that:

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Muir's end cap having [sic, to have] reinforcing ribs similar to Seitz's invention for the purpose of strengthening the end cap at the longitudinal portion thereof (col. 2, lines 47-50 [of Seitz]) in order for the end cap to withstand more force.

The appellant argues that there is no motivation for a person having ordinary skill in the art to have modified Muir to include a reinforcing rib as set forth in claim 1. The appellant contends that Seitz is non-analogous art.

³ After the scope and content of the prior art are determined, the differences between the prior art and the claims at issue are to be ascertained. Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966).

The test for non-analogous art is first whether the art is within the field of the inventor's endeavor and, if not, whether it is reasonably pertinent to the problem with which the inventor was involved. In re Wood, 599 F.2d 1032, 1036, 202 USPQ 171, 174 (CCPA 1979). A reference is reasonably pertinent if, even though it may be in a different field of endeavor, it logically would have commended itself to an inventor's attention in considering his problem because of the matter with which it deals. In re Clay, 966 F.2d 656, 659, 23 USPQ2d 1058, 1061 (Fed. Cir. 1992). In the present instance, we are informed by the appellant's originally filed specification that the invention is particularly directed to increasing the capacity (i.e., strength) of an end cap used in a multi-bar hinge linkage supporting bracket. Seitz teaches providing a support clip 10 with longitudinal strengthening ribs 12 and thus falls into the latter category of the Wood test, and logically would have commended itself to an artisan's attention in considering the appellant's problem. Thus, we conclude that Seitz is analogous art.

In our view there is motivation for a person having ordinary skill in the art to have modified Muir to include a reinforcing rib as set forth in claim 1. In this case, the motivation to combine the applied prior art references as set forth in the rejection comes from the nature of the problem to be solved. The nature of the problem to be solved is to increase the capacity (i.e., strength) of an end cap used in a multi-bar hinge linkage supporting bracket. As such, a person having ordinary skill in the art would

have looked to known techniques, such as the longitudinal strengthening ribs 12 of Seitz, for ways of increasing the capacity (i.e., strength) of Muir's end cap 60. Accordingly, the applied prior art establishes a case of obviousness since it presents evidence that would have led one of ordinary skill in the art to combine the relevant teachings of the references to arrive at the claimed invention as set forth in the rejection under appeal.

For the reasons set forth above, the decision of the examiner to reject claim 1 under 35 U.S.C. § 103 is affirmed.

Claims 2 to 6 and 8 to 12

The appellant has grouped claims 1 to 6 and 8 to 12 as standing or falling together.⁴ Thereby, claims 2 to 6 and 8 to 12 fall with claim 1. Thus, it follows that the decision of the examiner to reject claims 2 to 6 and 8 to 12 under 35 U.S.C. § 103 is also affirmed.

⁴ See page 2 of the appellant's brief.

Claim 7

We will not sustain the rejection of claim 7 under 35 U.S.C. § 103 as being unpatentable over Muir in view of Seitz as applied to claim 1 and further in view of Kasai.

Dependent claim 7 reads as follows:

The improved multi-bar linkage hinge assembly of Claim 1, wherein the reinforcing rib is formed of added metal.

Kasai's invention pertains to a bracket fitting for use in steel frame structures to effect a bolted connection between a beam and a column. As shown in Figures 1, 7 and 8, the brackets 20, 154 and 178 include a reinforcing element(s) or rib(s) 46, 170 and 190.

In the rejection of claim 7 before us in this appeal (answer, p. 7), the examiner ascertained that "Muir and Seitz disclose applicant's invention except for a reinforcing rib to be formed from added metal." The examiner thereafter concluded that:

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Muir and Seitz with ribs similar to Kasai's invention for the purpose of reinforcing the bracket, thus adding structural strength to the bracket and increasing the load capacity thereof.

The appellant argues that there is no motivation for a person having ordinary skill in the art to have modified Muir to include a reinforcing rib formed of added metal as set forth in claim 7. We agree. In our view, the only suggestion for further modifying the structure of Muir as modified by Seitz in the manner proposed by the examiner to arrive at the subject matter of claim 7 stems from hindsight knowledge derived from the appellant's own disclosure. The use of such hindsight knowledge to support an obviousness rejection under 35 U.S.C. § 103 is, of course, impermissible. See, for example, W. L. Gore and Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

For the reasons set forth above, the decision of the examiner to reject claim 7 under 35 U.S.C. § 103 is reversed.

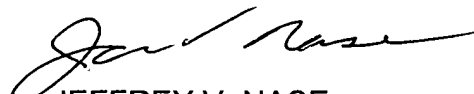
CONCLUSION

To summarize, the decision of the examiner to reject claims 1 to 6 and 8 to 12 under 35 U.S.C. § 103 is affirmed and the decision of the examiner to reject claim 7 under 35 U.S.C. § 103 is reversed.

No time period for taking any subsequent action in connection with this appeal
may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART


CHARLES E. FRANKFORT
Administrative Patent Judge


JEFFREY V. NASE
Administrative Patent Judge


JENNIFER D. BAHR
Administrative Patent Judge

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STEPHEN B. SALAI, ESQ.
HARTER, SECREST & EMERY LLP
1600 BAUSCH & LOMB PLACE
ROCHESTER, NY 14604-2711

JVN/jg